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and cure some diseases as it to conquer others. Some engineering problems require for their solution a high degree of ability and often great ingenuity, while a moderate degree of ability is necessary to solve others. The same is true of the problems in the other professions. As far as the teaching profession is concerned, it takes as high a degree of ability, of character and mind, and of all other high qualities, to mould the character and mind of the child attending the lowest grades of the elementary schools as it does to influence the student in the highest classes of the college. In all other professions and occupations there is room for persons with moderate ability. If they perform their duties conscientiously, their services are as necessary and important as are the services of those who are engaged in the more difficult problems of their profession. In the teaching profession there is room only for those of highest ability and superior qualities of character, mind and heart, if education is to accomplish its great mission, the amelioration of the race.

Teaching is an art, and a high and noble art. It is a God-given art to cut a statue out of a piece of marble, which after all is only subject to the chisel of the sculptor. What nobler art it is to mould the character and the mind of the child —with its environments, home influence and temperament—so as to make it, morally, mentally and physically as nearly as possible, a perfect man or woman.

The public provides, on the whole, liberally for the necessities of the community. If it could be made to see the great influence and the mission of education, then the respect for education and for the teacher will rise, and he will be accorded in every way the credit which he deserves.

UNIVERSITY OF PENNSYLVANIA,
PHILADELPHIA, PA.

THE AIMS IN TEACHING ALGEBRA AND HOW TO ATTAIN THEM.*

BY C. E. BIKLÉ.

It should be the aim of algebra teaching to secure a part, and that a large one, of the values to be derived from the study of mathematics. These values are very well stated by Professor

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* Abstract of paper read at meeting of Syracuse Section, December 29.

D. E. Smith and Professor J. W. A. Young, with whose books you are doubtless familiar. Granting that the securing of these values ought to be among the aims of teaching mathematics, some of the definite problems presented to the teacher of secondary mathematics are the following :

1. To interest pupils in mathematics, both as a subject by itself, and as applicable to science and to commercial and industrial life.
2. To establish valuable habits of accuracy, of verifying results, of promptness and of neatness of work, which can be carried into other lines of study and into business life.
3. To give the pupils those forms of reasoning and that training in logic that shall be helpful in other lines of work.
4. To prepare the pupils to pass with credit the examinations set by the different colleges.
5. To prepare the pupils to pursue successfully their college work in mathematics.
6. To give the pupils an interest in mathematics other than that which springs from the fact that it is necessary for their advancement in the school and their admission to college.

That one of the aims I have mentioned is not entirely reached is indicated by the following figures taken from the annual reports of the College Entrance Examination Board of the Middle States and Maryland.

	Total Number of Candidates.	Candidates from New York State.	Percentage of Candidates Receiving 60 Per Cent. or More.		
			To Quadratics.	Quadratics and Beyond.	Advanced Algebra.
1901	973	554	87	79	51
1902	1,362	818	70.4	53.2	Series 29.5 Th. equations 24
1903	1,620	892	68.8	48	Series 35 Th. equations 31.8
1904	1,817	982	59.8	59.7	Series 31.7 Th. equations 34.3
1905	2,077	1,065	43.6	31.6	Advanced Algebra 15.9
1906	2,432	1,106	59.1	53.5	Advanced Algebra 26.7
1907	3,048	1,267	48.6	34.6	Advanced Algebra 50
1908	3,250	1,235	29.6	37.7	Advanced Algebra 69.8

After making deductions for poor question-papers set by the examiners and for the fact that the board examinations are taken by many pupils who are not prepared for them, and not recommended by their teachers, I think it safe to say that there are some things to be remedied in the teaching of algebra.

College announcements frequently call attention to the inadequate preparation of students in algebra.

I cite the figures of the board because I have read many algebra papers for them in the years 1901–1908, and have a very distinct impression of the points in which pupils have failed. In factoring, for instance, improvement is noticeable in recent years, but there are still many candidates who do not seem to know what factoring means. Many leave the work unfinished, while others reach the form of an indicated product by doing great violence to the terms of the expression.

(*To be continued.*)

NOTES AND NEWS.

THE SECOND ANNUAL DINNER OF THE PHILADELPHIA SECTION, held on Saturday evening, February 13, proved to be a very delightful affair.

Previous to the dinner a reception was held in order that the members of the section might become better acquainted with each other.

There were fifty-nine present and Mr. Henry V. Gummere, of Drexel Institute, the chairman of the section, presided. The guest of honor was Professor David Eugene Smith, of the Teachers College, Columbia University. At the conclusion of the dinner he favored the assembly with a very interesting account of the work of the International Congress of Mathematicians, which met in Rome last summer.

Dr. Cheesman A. Herrick, principal of the new William Penn High School for Girls, made a plea for giving the pupils more practical work in mathematics.

Among other guests of the evening who gave very happy short talks were Mrs. Katherine D. Brown, of Drexel Institute, Mr. Eugene Randolph Smith, of the Polytechnic Preparatory School of Brooklyn, Dr. Fletcher Durell, of the Lawrenceville School, and Mr. George Alvin Snook, of the Central High School.

The evening was pronounced a great success, both mentally and socially.

AT THE AUTUMN MEETING OF THE PHILADELPHIA SECTION the subject for discussion was "The Original in Algebra." Papers upon the subject were presented by Dr. George B. McClellan Zerr and Mrs. Katharine D. Brown; the discussion was opened by Professor George H. Hallett.